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ABSTRACT

The design and effectiveness of the Amigos program, a two-way Spanish-English bilingual immersion program in Cambridge (Massachusetts) are described. In the program, half the instruction is in English, half in Spanish from kindergarten through eighth grade. Half the students are native Spanish-speakers and half are native English-speakers. The report begins with a description of the program's design, then presents two brief case studies of two native Spanish-speaking program graduates, including comments from interviews. The bulk of the report consists of the results of an attitude survey administered to all students in 1996 and of standardized tests of English and Spanish skills, including reading and mathematics subscales from 1990-91 through 1996-97. It is concluded that both native English-speaking and native Spanish-speaking groups are approaching balanced skills in the two languages in reading and math, and are gaining appreciation and knowledge of the others' cultures. Contains 22 references. (MSE)

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BECOMING BILINGUAL IN THE AMIGOS TWO-WAY IMMERSION PROGRAM

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RESEARCH REPORT 3

BECOMING BILINGUAL IN THE AMIGOS TWO-WAY IMMERSION PROGRAM

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Abstract

In debates over the value of bilingual education, the focus can sometimes stray from its ultimate consumers: the students. The purpose of this report is to examine students' attitudes, both through their school achievement in Spanish and English and through their responses to questionnaires, toward becoming bilingual in the Amigos two-way immersion program. The results from individual interviews and from an attitude inventory of their language progress and their experience in the Amigos program show that fourth- through eighth-grade students understand the importance of and enjoy becoming bilingual. The results from standardized achievement tests show that both English-speaking students and Spanish-speaking students in the Amigos program have attained near-native skills in the two languages in reading and math. Through exposure to the two cultures, many have developed a sense of biculturality as well.

Introduction

The debate around bilingual education continues to spark controversy between its detractors and its supporters. The education of linguistic minority students in the United States is a complex issue, involving contrasting theories of education itself, the values of American society, and the extent to which cross-culturalism can be maintained effectively. Although proponents of bilingual education argue that it increases students' academic success, opponents argue that it leads to academic failure (see, for example, Crawford, 1989; Hakuta, 1986; Porter, 1990; Wong Fillmore, 1991).

Success or failure of bilingual education cannot necessarily be addressed as a whole. Several different kinds of bilingual programs are available to the non-English-speaking student in the United States (see Note). These programs differ in the degree to which they promote and/or use English and the home language of the students in the classroom. Thus, the value of bilingualism is seen differently in the different programs. For example, transitional bilingual education is designed so that use of the two languages in the classroom is a temporary phase during transition to English mastery. In contrast, in two-way bilingual programs, in which instruction is given in both languages throughout the program, bilingualism is seen as the ultimate goal—the mastery both of English and of the home language.

While these differences in programs may seem to be purely ideological, the psychological impact on the students is enormous. Lambert (1974) distinguished between "additive" and "subtractive" bilingualism. The additive case implies that an individual suffers no loss of the primary language and the associated culture, while the subtractive case implies that an individual undergoes a loss of primary language skills and general academic performance. Lambert also drew attention to the roles played by attitudes, aptitudes, and motivation in second language learning. He believes that the degree of language mastery influences an individual's self-concept and sense of attainment of proficiency.

There are few studies of students' attitudes toward their own bilingualism, particularly in two-way programs (Christian, Montone, Lindholm, & Carranza, 1997). Griego-Jones (1994), in a small study of 10 Latino kindergarten students in a two-way program, found that the students actually preferred English over Spanish, because English was perceived to be the language of high status and achievement. Looking at older (fourth grade) students, Hayashi (1998) found that students in a two-way bilingual program and in a transitional bilingual program were equally enthusiastic about their bilingualism, as reported on questionnaires. In individual interviews, however, the students in the transitional program reported that they thought they did not need instruction in Spanish, because they already spoke Spanish. In contrast, the students in the two-way program all thought the time spent in Spanish instruction was valuable and necessary to their achievement in both languages.

Although neither of the studies mentioned above examined data on achievement, research on the most effective forms of bilingual education (usually in terms of English achievement) suggests that two-way programs may be the best. Two-way bilingual education has been described in a national study as "the program with the highest long-term academic success" (Thomas & Collier, 1997, p. 52). The students' success in these programs is undoubtedly due to a number of factors. These include opportunities for linguistic minority students to assume strong peer leadership roles in the classroom, an emphasis on grade-level academic instruction in both languages, sustained support for and use of multicultural curricula, and opportunities for non-English-speaking parents to form close partnerships with the school staff as well as with other parents. The purpose of the present report is to examine students'

development in a two-way bilingual program by focusing on both their attitudes toward becoming bilingual (and possibly bicultural) and their school achievement in both languages. Although we do not have data to examine causal links between attitudes and achievement, we see this study as a first step toward showing the relationship between the two.

The Amigos Program

Amigos is a two-way immersion program instituted in Cambridge, Massachusetts, in 1986 (see Cazabon, Lambert, & Hall, 1993; Lambert & Cazabon, 1994; see also Christian, 1994, for a broader review of two-way bilingual education). Students typically begin the program in kindergarten and continue through Grade 8. Half of each class is composed of native-English-speaking students and half of native-Spanish-speaking students. Students are taught by two native speakers, one English- and one Spanish-speaking, with approximately half the instruction time in Spanish and half in English (see Lindholm, 1990). Each ethnolinguistic group has much to gain from the bilingual/bicultural experiences afforded to all those involved in this program. The English-speaking students are given the basic building blocks needed to become proficient in Spanish and in interpersonal relations with a major American ethnic group—Hispanics. The Hispanic students develop skills in English through instruction in English, and through personal contacts with English-speaking youngsters. At the same time, the Hispanic students can maintain and enrich their command of Spanish by studying in Spanish with fellow Spanish-speaking classmates and with English-speaking classmates who are keen on learning Spanish and learning about Hispanic modes of behaving and thinking. The Amigos program could be seen as a very promising way for Hispanic students to master English and academic content while keeping their heritage language and culture alive—a case of "additive bilingualism."

There are, of course, risks involved for both groups: Because half their instruction is in Spanish, the English-Amigos (native-English-speaking students in the Amigos program) may feel that insufficient time and attention are given to English. The Spanish-Amigos (native-Spanish-speaking students in the Amigos program) may feel that they need full time in English to make educational progress. Consequently, we think it is important to understand both to what extent students become fully bilingual and how they feel about their bilingualism.

In this report, we examine students' progress toward bilingualism in the Amigos two-way immersion program in several ways. In order to gain insight into students' attitudes toward becoming bilingual, we first report segments from in-depth interviews with two Hispanic Amigos students. We then look at all of the Amigos students' responses to certain items on a questionnaire—items related to the importance of becoming bilingual. Finally, in order to see if students are in fact becoming bilingual and achieving academically in two languages, we examine the Amigos students' scores on standardized achievement tests of reading and math in English and Spanish across a 5- to 6-year period. One underlying theme is a search for evidence of change over time. That is, as the Amigos students spend more time in a two-way bilingual program, is it possible that their attitudes about bilingualism and their academic achievement improve?

Case Studies

Ana Martínez: "I could achieve something, if I knew Spanish and tried to learn as much as I could, to do something that others couldn't do."

Diana Ruíz: "My mom wants me to have a good education and wants me to know Spanish and English real good, so I have better opportunities to get a job."

To further illustrate students' opinions about the Amigos program, we have begun to interview students who have completed Grade 8 about their thoughts regarding their educational experiences. Here we present some highlights of interviews with two eighth-grade Amigos students. Both students are girls of El Salvadorian descent; approximately 35% of the Latino students in the Amigos program are of El Salvadorian heritage. Although these two students are in many ways typical of Latino students participating in the Amigos program, it is not our intention to generalize their stories to all students in the program, because we realize that every student is unique.

Ana Martínez was born in the United States, and her parents use both Spanish and English in the home. Diana Ruíz was born in El Salvador, and her family has opted for a totally Spanish environment at home. We give further details of their lives below before reporting their opinions on the Amigos program and their own bilingualism.

Ana is 13 years old and the oldest of three siblings. She entered the Amigos program in Grade 2 after being placed for 2 years (kindergarten and Grade 1) in an all-English program at another public school. Her two younger siblings began the Amigos program in kindergarten. Her parents have recently purchased a small home in the heart of the city, and they are actively involved in the Latino community. Her nuclear family has a large extended family, both in Cambridge and in El Salvador, and often travels to El Salvador. Ana takes care of her younger siblings after school. She is learning about Salvadorian cooking from her grandmother; she already knows how to knead and prepare the dough for *pupusas*. She and her family are active members of the Catholic parish that celebrates Sunday Mass in Spanish. Although she appears to be quiet and serious, she says that sometimes she likes to "goof off." She is a solid student in both English and Spanish. According to her CAT (California Achievement Test) and SABE (Spanish Achievement in Bilingual Education) scores, she is above grade level in both English and Spanish reading and math. Ana was adamant about continuing her education, saying, "I would never stop high school and not finish it. Nothing would make me stop." She says that she plans to continue studying Spanish in high school. In terms of career thoughts, Ana spoke about doing something with computers or maybe becoming an architect, but she also said that she was not sure right now about what she wanted to do in the future.

Diana is also 13 years old and entered the Amigos program in Grade 2, having completed kindergarten and Grade 1 in the Spanish Transitional Bilingual Education Program. Diana's parents are divorced. She lives with her mother and brother in a small apartment in a commercial building complex. She is very quiet and reserved by nature, with a wry sense of humor. She describes herself as "friendly, and can be funny sometimes." She said that she likes to watch TV and listen to music in English and Spanish. She takes care of a younger cousin after school. Diana sees the value of being bilingual if she pursues a career in business. She is a good student in Spanish and English, with CAT and SABE scores above grade level in reading and math. She felt that there was nothing that would keep her from not finishing high school. After high school, she wants to go to college. Although she is not sure, she thinks that she will be involved professionally in business. "Business seems to interest me," she stated.

Both students credited the Amigos program for at least part of their school achievement. Ana, in describing her positive school experiences, said that the "Amigos teachers had patience," "understood children with problems," and "gave students time to figure things out." She also said that sometimes they were "a little strict" but that was "okay" with her. Self-described as having English as her first language, she stated that she began feeling comfortable with Spanish when she was in the third or fourth grade. By the middle grades, she said, the teachers began assigning more difficult work, so that students needed more Spanish to do the work and understand what the teacher was saying. She admitted that she put a lot of effort into her school work: "Sometimes, the work gets very hard and I want to give up, but then I think about what would happen if I did, so I push myself. It can be aggravating." She also felt that other students were there for her: "They are like your brothers and sisters. You can count on them." Most of her friends are her classmates. Diana, whose first language is Spanish, said she did not begin speaking English until second grade, when she entered the Amigos program. She remembered reading a book in English about Helen Keller and writing books in Spanish at that time.

In discussing the importance of family to school achievement, Ana said, "My family pushes me to work hard and to study to get good grades so that I will get a scholarship, and after college I will get a good job." Her father is the one who helps her most with her homework—sometimes in Spanish. She said that both parents want her to lose her English accent when speaking Spanish. She feels well supported by her family and can talk to them about any problems. Diana described her mother as wanting her to have a good education and to learn Spanish and English "real good." Her mother tells her that she will be able to get a better job if she knows both languages. Her mother always asks her about her homework. She feels that her family is friendly and understanding. She said that she always speaks to her mother in Spanish.

In giving advice about how to make the program better, Ana said that more classes in Spanish (especially in the upper grades) should be given. She said that the balance between English and Spanish is essential. She emphasized the disadvantage of not offering equal time in Spanish: "Kids could pull away from Spanish and might start forgetting. If it is equal to English, they will concentrate more on both and do better in their work." Diana could not think of any way that the program could be changed to make it better.

Throughout the interviews, the students' understanding of the value of bilingualism was clear. Ana pointed out that she sees being bilingual as a plus to her life and future prospects. She commented that through the program she has learned much about other cultures, especially those of Latin America. Describing herself as having English as her first language, she says that she has to work hard to get rid of her English accent when she speaks Spanish. Ana added that she felt that she could achieve something by knowing Spanish. She commented on the potential value of her bilingual education by saying that although school was a challenge, it made her concentrate and solve things for herself—skills that she might need in the future. Diana said that it is important to know English, "because it is the language you have to speak in the United States, and most people speak English." She said that Spanish is also important to her, because she comes from El Salvador. She feels equally competent in both languages. Sometimes she speaks Spanish with her friends, and at other times she speaks English. She is planning to continue Spanish in high school and add French. She said that being bilingual will help her in her career, "just to talk to people in both languages, so that everybody will understand. It will make my business more successful."

Results From an Attitude Survey

To understand how the Amigos students as a group feel about their progress in their two languages, we turn to data taken from students' responses to a questionnaire, *Pupils' Opinions of the Amigos Program*, administered to all Amigos students in the Spring of 1996. An earlier report (Lambert & Cazabon, 1994) indicated that both groups were beginning to develop confidence in their bilingualism:

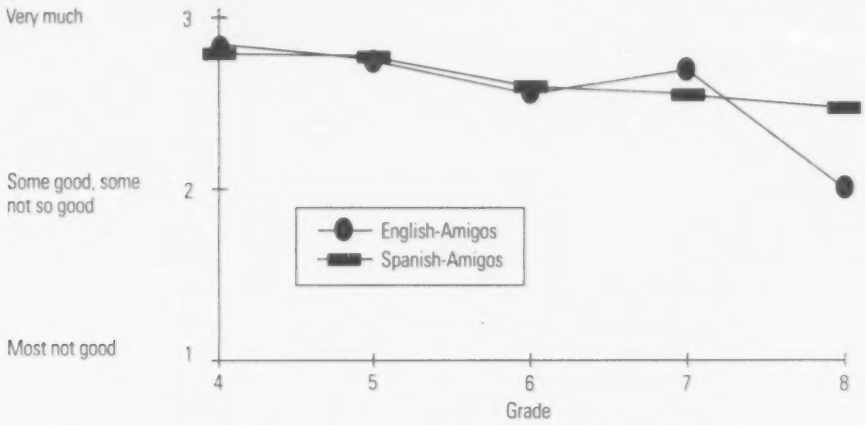
- The English-Amigos believed that they were a "little better in English than Spanish."
- The Spanish-Amigos thought that they were a "little better in Spanish than English," or at the same level in both languages.
- Both English- and Spanish-Amigos thought that they could be "good teachers" of Spanish and English.
- Had they been born into an Hispanic home, the English-Amigos would be "just as happy" as they are now.
- The Spanish-Amigos were not sure how they would feel had they been born into an English-only home.
- Both groups felt that "just about the right" amount of time was being spent in Spanish instruction (i.e., 50% of the time) and that they were not behind in English skills compared to those in all-English programs, but were, in fact, "likely ahead" in English.

The present report focuses on students' responses to questions about their interest in bilingualism. The average response scores are shown in Figures 1 to 4, with the sample sizes for each grade shown in the table below each figure. Note that the sample sizes are small (particularly with the English-Amigos in Grade 8) and are therefore not likely to be reliable.

The first two questions focus on students' opinions of Spanish and English instruction in the Amigos program. Figure 1 shows the average response to Question 21, "Do you enjoy studying Spanish and English the way you do at your school?" Note that the average for all grades was quite high, although there was a trend to report less enjoyment at higher grade levels, especially for English-Amigos in Grade 8.

Figure 2 shows the average response to Question 23, "In your opinion, is too much time spent on Spanish?" Here, there is little difference between the English- and Spanish-Amigos and little difference by grade level. Both groups at all grades seem to think that about the right amount of time is spent on Spanish.

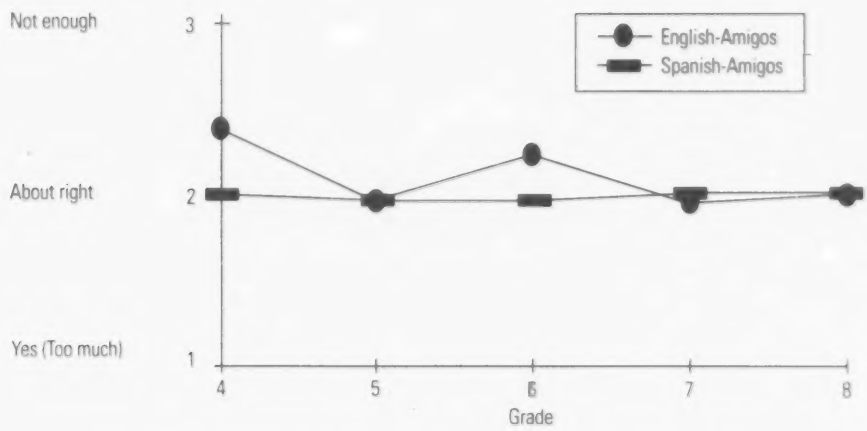
Figure 1 Amigos' Opinions on How Much They Enjoy Studying Spanish and English the Way They Do in School



Number of Students Responding to This Question, by Grade

Grade:	*4*	*5*	*6*	*7*	*8*
English-Amigos	*8*	*16*	*11*	*9*	*3*
Spanish-Amigos	*24*	*14*	*14*	*19*	*14*

Figure 2 Amigos' Opinions on Whether Too Much Time Is Spent on Spanish



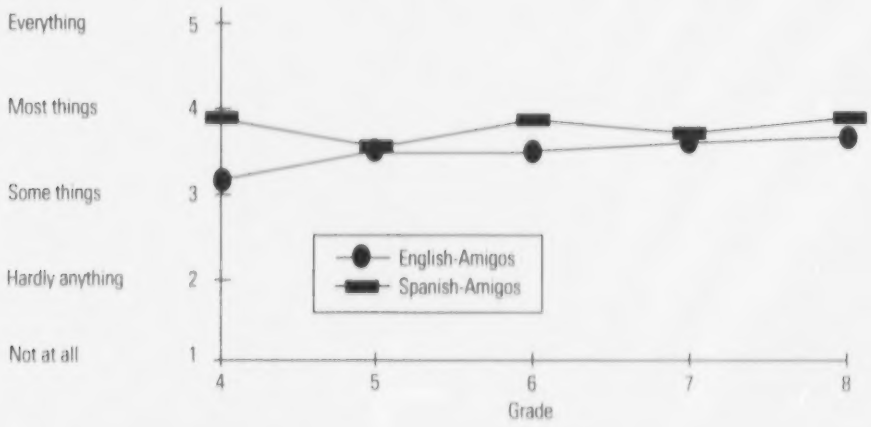
Number of Students Responding to This Question, by Grade

Grade:	*4*	*5*	*6*	*7*	*8*
English-Amigos	*8*	*16*	*12*	*10*	*3*
Spanish-Amigos	*24*	*14*	*14*	*18*	*14*

To summarize Figures 1 and 2, most students indicate that they enjoy learning Spanish and English in the Amigos program and that they think that about the right amount of time is spent on Spanish. At the same time, a slight decrease in satisfaction with Spanish and English as they are taught in the Amigos program was seen across the grade levels. It is possible that as the students get older and understand that they will have to look for jobs, they start to think that learning Spanish in the United States may not be the most efficient use of their time. However, because we do not have responses from control groups, it is equally possible that students become disillusioned with schooling as they get older, and the decrease in satisfaction may not reflect anything in particular about the Amigos program. Furthermore, we should note that, after fifth grade, 8.5% of the Amigos are invited to leave the Amigos program and join the gifted and talented program at a different school. The absence of some of the best learners may account at least partially for the slight decrease in satisfaction seen across grade levels. Typically, the English controls who are housed in the same school as the Amigos students are not invited to participate in the gifted and talented program.

We next turn to students' responses to questions about their opinions on their own proficiency in both Spanish and English. Figure 3 shows the average of responses to Question 6, "How good are you at translating from Spanish to English or from English to Spanish?" Here, there is little difference between the English- and Spanish-Amigos and little difference by grade level. Both groups at all grades seem to think that they can translate more than "some things" but less than "most things."

Figure 3 Amigos' Opinions on How Well They Translate Between English and Spanish

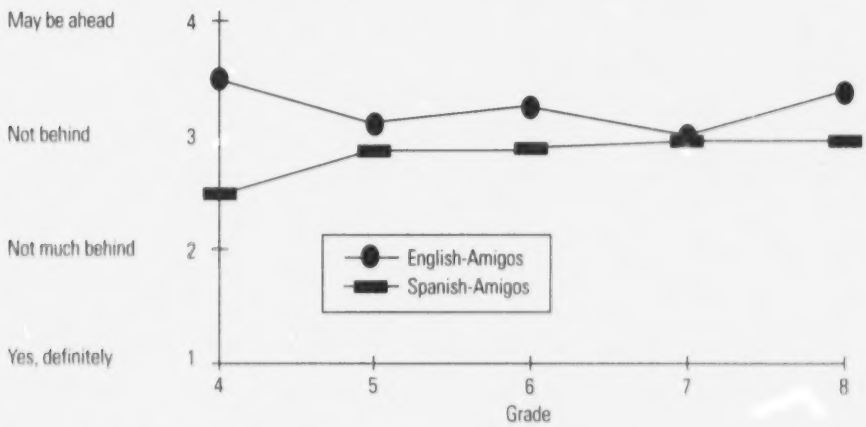


Number of Students Responding to This Question, by Grade

Grade:	*4*	*5*	*6*	*7*	*8*
English-Amigos	*8*	*18*	*12*	*10*	*3*
Spanish-Amigos	*24*	*14*	*16*	*20*	*14*

Figure 4 shows the average response to Question 25, "Do you think you are behind in English compared to children at other schools?" Here again there is little difference by grade level. There is a slight difference between groups, however, with the English-Amigos reporting that they are generally "not behind in English at all." The fourth-grade Spanish-Amigos think they are closer to "a bit behind but not very much," but by fifth grade, they think they are not behind at all.

Figure 4 Amigos' Opinions on Whether They Are Behind in English



Number of Students Responding to This Question, by Grade

Grade:	*4*	*5*	*6*	*7*	*8*
English-Amigos	*7*	*15*	*12*	*9*	*3*
Spanish-Amigos	*24*	*14*	*15*	*19*	*14*

To summarize Figures 3 and 4, the students rate themselves fairly high on proficiency in both languages: Both groups report that they can translate well between languages, and by Grade 5, they think they are not very far behind in English compared to children at other schools. We next see if their optimistic outlook on their bilingual abilities is reflected in their scores on standardized tests of reading and math in both languages.

Standardized Tests in English and Spanish

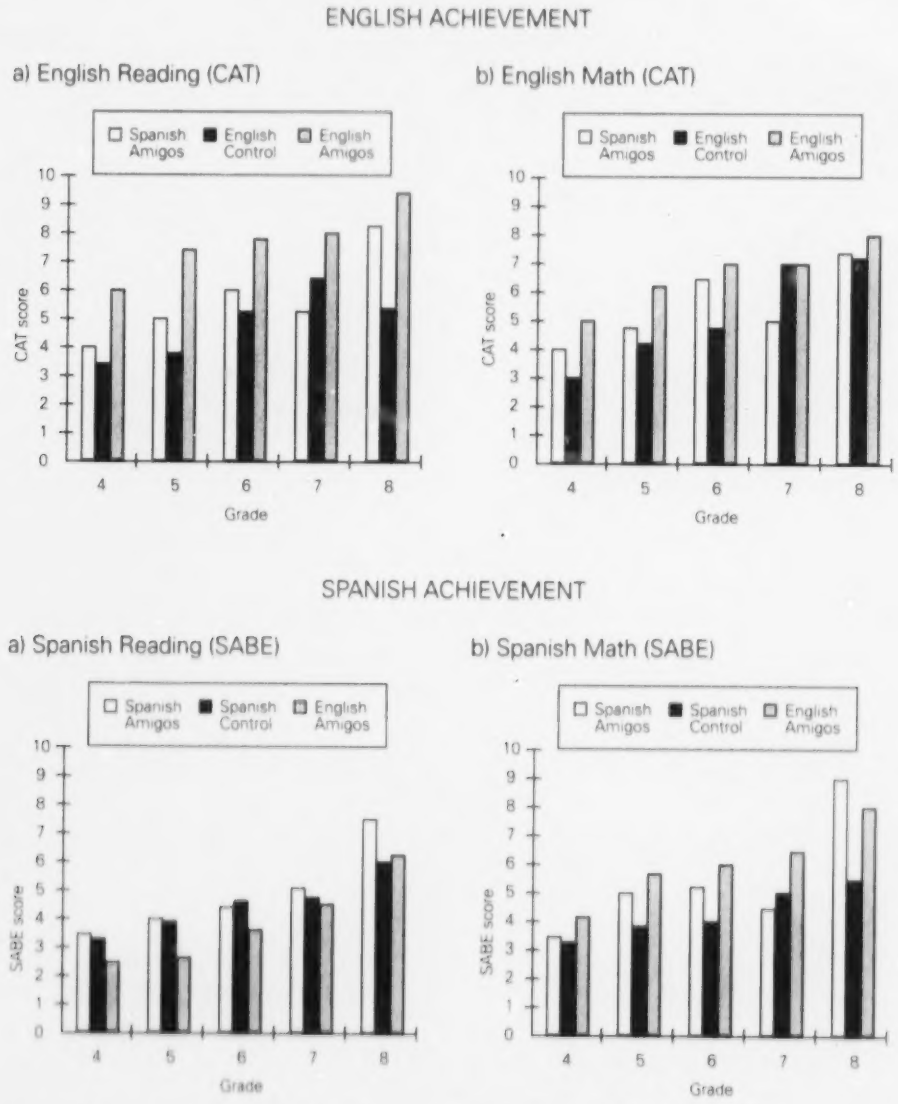
To make a judgment about the Amigos' achievement of bilingualism, we compare their reading and math scores on standardized tests in English and Spanish to the scores of control groups on the same tests. If the Amigos have achieved bilingualism (with regard to academic language use), we would expect that both groups of Amigos would score the same or higher on the English achievement tests as the English-speaking control group and the same or higher on the Spanish achievement tests as the Spanish-speaking control group. In order to increase the total numbers for each subgroup and to provide a better perspective on the overall progress of the program, we combine results from a sequence of several years. We view the combination of different classes over a series of years as justifiable for this report, because (a) the basic curriculum is essentially the same from year to year, (b) the teachers, with few replacements, are the same at each grade level, and (c) the direction and general philosophy of Amigos bilingual education has not changed over the years. The evaluation of Amigos' Spanish achievement is based on test results from 6 school years, 1990-91 through 1996-97, with a different test administered in the last year. The evaluation of Amigos' English achievement is based on results from the same school years, with the same test used in all 6 years.

The data on the control groups are provided as a comparison of the students' performance in the programs the Amigos might have been enrolled in, if the Amigos program did not exist. The English controls are native-English-speaking students enrolled in the regular all-English stream that is housed in the same school as the Amigos program. The Spanish controls are native-Spanish-speaking students enrolled in the transitional bilingual stream in the Cambridge Public Schools. Students in the transitional bilingual classes are essentially an "early-exit" control group, meaning that they are to be integrated into all-English classes as soon as possible. Their course of instruction is designed by Spanish-speaking and English-as-a-second-language teachers to help them progress as rapidly as possible in English. Spanish-speaking students who arrive in Cambridge at any age are usually offered 2 or 3 years of transitional bilingual education before they switch to the all-English curriculum. Consequently, Spanish-speaking control group students in the higher grades (6, 7, or 8) were most likely in all-Spanish schools outside the United States for several years prior to their enrollment in Cambridge schools and are likely to have more facility with the Spanish language.

The standardized test of English achievement was the CAT (California Achievement Test, 1985), and the standardized test of Spanish achievement was the SABE (Spanish Achievement in Bilingual Education, 1991), with information collected on age/grade equivalents from across the public schools in the United States. The students' achievement on both the reading and math subtests of the CAT and the SABE are reported.

One distinctive feature of our research design was our control for nonverbal intelligence or abstract reasoning competence, as indicated by the Coloured Progressive Matrices (Raven, 1986), a test that has been analyzed in detail by Carpenter, Just, and Snell (1990). In all the subsequent analyses presented here, we have co-varied the students' scores on the achievement tests using the students' scores on the Raven test. Thus, in this study, we compare Amigos and control groups who are as much alike as possible in nonverbal abstract reasoning ability and in the socioeconomic area in which their schools are located. The exact averages, sample sizes, and statistical results can be found in Appendixes A through D. The results are summarized in Figure 5 and in Tables 1 and 2.

Figure 5 Summary of Language Achievement Scores



Note: This figure graphs the adjusted means for each grade and group with the Raven score co-varied; the exact numbers are also presented in Appendixes A through D. CAT = California Achievement Test. SABE = Spanish Achievement in Bilingual Education.

As can be seen in Figure 5 (and as summarized in Table 1), the English-Amigos scored as well as or better than the English control group on the CAT. The Spanish-Amigos scored no differently from the English control group in reading on the CAT and scored significantly higher than the English control group in English-language math in Grades 4 through 6. These results suggest that both groups of Amigos have achieved a high degree of English proficiency with regard to their academic work.

Table 1 Summary of Comparisons Between the Amigos Groups and the English Controls on the CAT (California Achievement Test)

	English-Amigos vs. English controls		**Spanish-Amigos vs. English controls**	
	Reading	*Math*	*Reading*	*Math*
Grade 4	EA above controls	EA above controls	SA above controls	SA above controls
Grade 5	EA above controls	EA above controls	SA above controls	SA above controls
Grade 6	EA above controls	EA above controls	SA above controls	SA above controls
Grade 7	EA above controls	No difference	SA below controls	SA below controls
Grade 8	EA above controls	EA above controls	SA above controls	No difference

Note. EA = English-Amigos; SA = Spanish-Amigos.

The summary in Table 2 (following page) for the SABE test of Spanish achievement reveals that the Spanish-Amigos scored as well as or better than the Spanish control group in reading and math at all grades. Recall that the Spanish control group is composed of students who have likely been in all-Spanish-speaking schools in their native countries immediately prior to their arrival in the Cambridge school; thus, the higher the grade of these control subjects, the longer their time in Spanish-language schools is likely to have been, and the better developed their Spanish-language skills are likely to be. The English-Amigos scored significantly lower in reading than the Spanish control group in Grades 4 to 6 and as well as or better than the Spanish control group in math at all grades. While the English-Amigos did not score significantly lower in reading than the Spanish control group in Grades 7 and 8, the sample sizes are so small that it is not possible to conclude with any certainty that they have caught up to the Spanish control group in Spanish reading. In sum, these results suggest that the Spanish-Amigos have maintained a high degree of Spanish proficiency with regard to their academic work. The English-Amigos have attained some degree of Spanish proficiency, as evidenced by their scores on the word problems of the SABE math test. The math tests require use of the Spanish language to fathom the complex wording of math problems.

Table 2 Summary of Comparisons Between the Amigos Groups and the Spanish Controls on the SABE (Spanish Achievement in Bilingual Education) Tests

	Spanish-Amigos vs. Spanish controls		English-Amigos vs. Spanish controls	
	Reading	*Math*	*Reading*	*Math*
Grade 4	No difference	No difference	EA below controls	No difference
Grade 5	No difference	SA above controls	EA below controls	EA above controls
Grade 6	No difference	SA above controls	EA below controls	EA above controls
Grade 7	No difference	No difference	No difference	EA above controls
Grade 8	SA above controls	SA above controls	No difference	EA above controls

The data from these analyses of 8 years of the Amigos program suggest that both the English-Amigos and Spanish-Amigos are moving toward a balanced state of skill in reading both English and Spanish and in using the two languages to solve math problems. The Spanish-Amigos have achieved remarkable proficiency in both English and Spanish. The English-Amigos have maintained high proficiency in English, and although their Spanish achievement may occasionally fall behind that of Spanish speakers, they are clearly achieving a high degree of Spanish proficiency.

Conclusions

To summarize the results reported here, the picture is generally favorable for both the English and the Spanish-Amigos. We can safely conclude that both ethnic groups in the Amigos program are approaching balanced skills in the two languages in reading and math. Furthermore, through daily contact with the other group, students are gaining an appreciation of and knowledge about the culture of the other group. More data are needed, however, especially from the upper grades, before we can make fully confident claims of bilingualism and biculturalism for these students.

Although the results presented here are clearly only the beginnings of what may be found through studies of increasingly larger numbers of students, they do suggest several possibilities for the school system and for education policy makers in the United States. For instance, we have noted with chagrin that many of our most academically promising English- and Spanish-Amigos (in equal numbers) are offered the chance to switch to "gifted and talented" classes in Grades 6, 7, and 8. Our research thereby suffers from the loss of our best students. At the same time, we wonder whether the Amigos program itself may not be an option that promotes talent and giftedness for all those who stay with it. The program, in other words, may become a new form of non-elitist, talent-promoting gifted program open to all students, if further studies of two-way bilingual programs confirm what we have seen so far.

Some answers to the hard questions often put to researchers on bilingual development are suggested by the results presented here. One answer may be that education in two languages may be beneficial for all children. The English-Amigos are not behind in English, even though they receive only 50% of their instruction in English; their English seems to be as good as, or in many instances better than, that of students who are in an all-English program. They generally score higher in math than students in an all-English program. Moreover, they seem to develop an equally high academic performance level in Spanish. The same story seems to hold true for the Spanish-speaking Amigos. We notice as well that both English- and Spanish-Amigos enjoy learning about a new and different cultural group through long-term daily contact with members of a second ethnolinguistic group, who become like brothers and sisters to them.

In answer to those who are critical of bilingual education, the suggestion in this research is that immigrant students can better learn and master English if they are simultaneously permitted to develop or maintain a high degree of literacy in their native language. The test results we see from Spanish-Amigos are particularly remarkable, given the high dropout and failure rate of Latinos in many other bilingual programs (see, e.g., Suárez-Orozco, 1989). The Spanish-Amigos perform well on standardized tests of both English and Spanish, particularly when compared to Spanish-speaking students in transitional bilingual programs (see Thomas & Collier, 1997). In contrast to educational programs that do not allow minority students to get ahead (see Ogbu & Matute-Bianchi, 1986), in the Amigos program it is possible for minority students to succeed. According to the two students whose interview results were reported earlier, nothing would prevent them from finishing high school. In summing up the quality of the Amigos program, we leave the last words to Diana Ruíz: "The program is good, because somebody who doesn't know Spanish can still learn it, and somebody who doesn't speak English can learn English and still have Spanish. Pretty soon, you will have two languages."

Note

August and Hakuta (1997) identified seven different kinds of programs in the United States that serve English-language learners: English as a second language (ESL), content-based ESL, sheltered instruction, structured immersion, transitional bilingual education (TBE), maintenance bilingual education, and two-way bilingual programs. Of the seven types, only TBE, maintenance, and two-way offer instruction in the student's first language. The others are programs that deliver instruction only in English. ESL programs are the most widely used, followed by TBE. In fact, Sheppard (1995) identified more than 1,600 schools that offer ESL (content-based/sheltered) instruction nationwide, whereas structured immersion and maintenance programs are rare (August & Hakuta, 1997). The number of two-way bilingual programs has increased to 182 schools across the United States (Christian & Whitcher, 1995).

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Appendix A

English Reading Scores, CAT (California Achievement Test)

		English Controls	English-Amigos	Spanish-Amigos	F-tests
Grade 4	*Adjusted Mean*	3.43[A]	5.85[AB]	4.00[B]	39.56, p = 0.00
	Sample size	78	75	108	
Grade 5	*Adjusted Mean*	4.05[A]	7.11[AB]	4.78[B]	41.12, p = 0.00
	Sample size	75	53	83	
Grade 6	*Adjusted Mean*	4.84[A]	7.81[AB]	6.19[B]	7.00, p = 0.002
	Sample size	10	24	25	
Grade 7	*Mean*	6.74	7.98	5.81	2.40, p = 0.11
	Sample size	7	12	18	
Grade 8	*Mean*	6.97[A]	9.58[A]	8.43	4.69, p = 0.01
	Sample size	42	11	16	

Note: In Grades 4 through 6, each student's score on the CAT was co-varied, using the Raven test; the adjusted means are presented in the table. Superscripts indicate a significant difference ($p < .05$) between two groups (i.e., AA or BB) by Scheffé's post hoc test.

Appendix B

English Math Scores, CAT (California Achievement Test)

		English Controls	English-Amigos	Spanish-Amigos	F-tests
Grade 4	*Adjusted Mean*	3.04^{AB}	4.88^{AC}	4.10^{BC}	35.59, p = 0.00
	Sample size	70	75	108	
Grade 5	*Adjusted Mean*	4.05^{AB}	6.11^{AC}	4.95^{BC}	32.18, p = 0.00
	Sample size	75	51	88	
Grade 6	*Adjusted Mean*	4.59^{A}	7.00^{AB}	6.60^{B}	6.77, p = 0.002
	Sample size	10	24	25	
Grade 7	*Mean*	7.01	7.07^{A}	5.26^{A}	4.03, p = 0.03
	Sample size	7	12	19	
Grade 8	*Mean*	7.33	8.06	7.77	0.40, p = 0.67
	Sample size	44	11	15	

Note. In Grades 4 through 6, each student's score on the CAT was co-varied, using the Raven test; the adjusted means are presented in the table. Superscripts indicate a significant difference ($p < .05$) between two groups (i.e., AA or BB) by Scheffé's post hoc test.

Appendix C

Spanish Reading Scores, SABE (Spanish Achievement in Bilingual Education)

		Spanish Controls	Spanish-Amigos	English-Amigos	F-tests
Grade 4	*Adjusted Mean*	3.38[A]	3.49[B]	2.25[AB]	17.76, p = 0.00
	Sample size	30	79	56	
Grade 5	*Adjusted Mean*	4.08[A]	4.03[B]	2.56[AB]	11.19, p = 0.00
	Sample size	37	53	35	
Grade 6	*Adjusted Mean*	5.00[A]	4.71	3.30[A]	3.60, p = 0.04
	Sample size	13	13	10	
Grade 7	*Mean*	4.80	5.10	4.59	0.17, p = 0.84
	Sample size	9	9	15	
Grade 8	*Mean*	5.93	7.47	6.35	0.22, p = 0.81
	Sample size	3	3	2	

Note: In Grades 4 through 6, each student's score on the CAT was co-varied, using the Raven test; the adjusted means are presented in the table. Superscripts indicate a significant difference ($p < .05$) between two groups (i.e., AA or BB) by Scheffé's post hoc test.

Appendix D

Spanish Math Scores, SABE (Spanish Achievement in Bilingual Education)

		Spanish Controls	Spanish-Amigos	English-Amigos	F-tests
Grade 4	*Adjusted Mean*	3.73	3.67	4.10	2.16, p = 0.12
	Sample size	30	81	55	
Grade 5	*Adjusted Mean*	4.08[AB]	4.91[A]	5.35[B]	8.64, p = 0.00
	Sample size	37	53	33	
Grade 6	*Adjusted Mean*	4.44	5.51	5.68	2.38, p = 0.11
	Sample size	13	13	10	
Grade 7	*Mean*	5.24	5.02[A]	6.81[A]	4.49, p = 0.02
	Sample size	9	9	15	
Grade 8	*Mean*	5.43	9.37	8.35	2.26, p = 0.20
	Sample size	3	3	2	

Note: In Grades 4 through 6, each student's score on the CAT was co-varied, using the Raven test; the adjusted means are presented in the table. Superscripts indicate a significant difference ($p < .05$) between two groups (i.e., AA or BB) by Scheffé's post hoc test.

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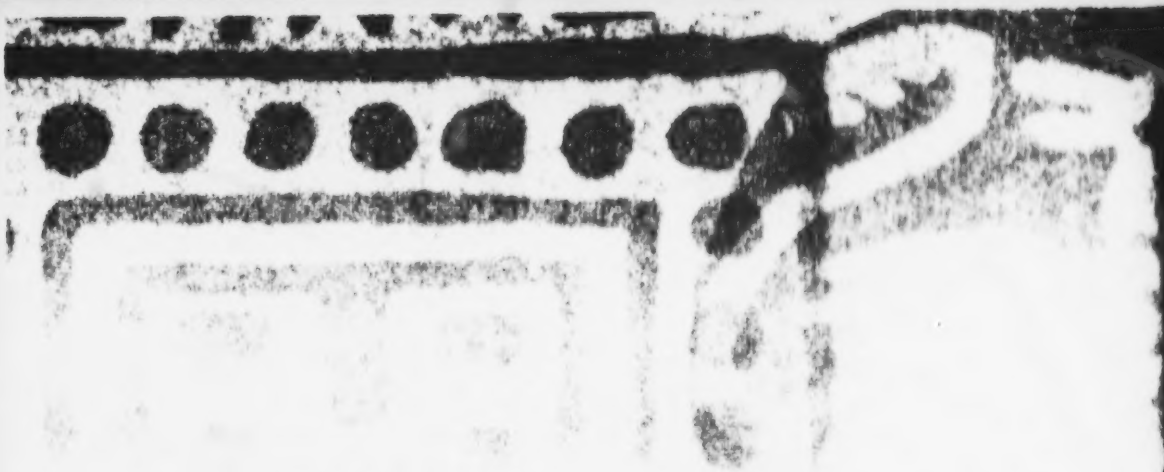

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